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Approved by: Roger A. Wentzel U.S. Embassy

Prepared by: Hasse Kristensen

Report Highlights:

This report supplement the EU-25 Annual Agricultural Biotechnology Report (E35091), providing specific details on the situation in Denmark.

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Section I. Executive Summary

The acceptance of biotechnology in Denmark is expected to move forward on a slow path and it is unclear whether consumers and retailers will ever readily accept GM-labeled food products. The implementation of EU traceability and labeling regulations has gone smoothly, but as in other EU countries there are virtually no labeled products appearing on Danish food store shelves at the present time. Nevertheless, Danish producers, the food industry and government recognize the potential advantages of biotechnology and believe it is crucial that Denmark invest in biotech research to take advantage of the technology and maintain the competitive position of Danish companies.

Section II. Biotechnology Trade and Production

No biotechnology crops are grown commercially or are presently field tested in Denmark. Danish companies have been developing genetically engineered rapeseed, beets and grass seeds. All field testing is on hold in Denmark. Danish companies are conducting rapeseed field tests in Canada.

Danish researchers at the Royal Agricultural University in Copenhagen have developed a biotech cassava, which breaks down cyanogens glycosides. This cassava is now going to be field tested in China. If these field trials are successful, field trials will be continued in Africa.

For soy protein production for food applications, Denmark imports annually about 100,000 tons GM-free soybeans, mainly from the United States. About 1.8 million tons of soybean meal is imported from South America, mainly from Argentina, for use by the feed industry in the production of swine, poultry and dairy feed. These meals most likely are from biotech soybeans and require GM-labeling of the feed. However, since the EU labeling regulations do not require GM labeling of animal products, such as meat, milk and eggs, the current utilization of GM-protein meals in animal feed is not readily apparent to the Danish consumer.

Section III. Biotechnology Policy

As an EU Member State, Denmark takes part in EU policy discussions and decision making processes regarding the regulation and approval of biotech products. Officials from the Ministry of Family and Consumer Affairs are involved in these matters as it relates to food applications. Officials from the Ministry of Food, Agriculture and Fisheries and the Ministry of Environment are involved in the EU GMO approval process.

The marketing of biotech products in Denmark is regulated in accordance with EU regulations, including EC regulations 1829/2003 and 1830/2003. To date, Post is not aware of any commercial problems in connection with the implementation of the new regulations in April 2004. The Plant Directorate, Ministry of Food, Agriculture and Fisheries controls the traceability and labeling regulations for feed, while the regulations for food is controlled by the Veterinary and Food Administration, Ministry of Family and Consumer Affairs.

Although in principle positive towards introduction of biotechnology, the Danish government has voted consistently against the approval of new biotech applications in Brussels. Consumer skepticism about GM products, combined with opposition to biotechnology by a majority of the members of the Danish Parliament, make it difficult for the government to take a more proactive position.

Both Danish farmer organizations and the food industry would like to see a more rapid and less controversial introduction of biotech crops and food. They view the advantages much like producers in the United States—the development of greater production efficiencies through the introduction of plant traits such as herbicide tolerance and insect resistance. The food industry sees future biotech applications for developing specific product qualities and functional characteristics. Both Danish farmers and the food processing industry see biotechnology as a key factor in maintaining their long-run competitiveness and technological edge over the competition. However, their hands remain tied for the present because consumers remain unconvinced of the benefits, certain non-governmental organizations continue to actively oppose biotechnology, and Danish food retailers are not interested in marketing biotech-labeled food.

In June 2004, the Danish parliament passed legislation on coexistence between biotechnology and non-biotechnology crops (including organic agriculture). With the exception of the liability provisions of the law, which still needs EU Commission approval, the law entered into force in April 2005.

Under the law, growers of GM crops are responsible for maintaining the proper distances visà-vis conventional or organic producers. Producers of conventional or organic crops who believe their production has been damaged by genetic drift from a GM field may apply to the government for compensation, provided they have a minimum loss of DKK 5,000 (about 690 Euros). Compensation will be financed by a fund, partly based on taxes paid by farmers and partly by a tax of DKK 60 (about 8 Euros) per hectare on GM crop plantings.

The legislation requires that farmers who want to plant GM crops on a commercial scale must:

- pass a training course and obtain a permit;
- give prior notice to neighboring farmers of their intention to plant a GM crop;
- assure that the minimum separation distances are maintained;
- inform the Danish Plant Directorate of GM crop plantings;
- inform other cooperative partners, such as commercial harvesting operators and transportation companies.
- adhere to cropping intervals determined by the Ministry of Agriculture

The Danish Plant Directorate provides on its Danish language webpage (www.pdir.dk) a map showing exact locations of fields planted to GM crops. For 2005, one field of corn is registered. This field is a project (not an experimental field) carried out by the Danish Institute of Agricultural Sciences, Ministry of Food, Agriculture and Fisheries, for yield estimations.

No other biotech crops have been planted. At this time, no other GM crop plantings are foreseen within the coming two years.

The Government Advisory Committee for Food Research presented in mid-November, 2004, a report (titled "Healthy, Secure and Tasty Food through Biotechnology") with recommendations for a future Danish biotech food research strategy to the Minister for Food, Agriculture and Fisheries and the Minister for Family and Consumer Affairs. The report recommends an additional \$100 million for biotech research over the next three years.

The report included input from researchers from institutions such as the Danish Agricultural and Veterinary University, Danish Technical University, Aarhus University, Danish Veterinary Institute, Danish Institute for Fisheries Research, Danish Slaughterhouses and Novo Zymes. It highlighted that bread, yeast, beer and cheese today would not exist without

biotechnology. The report also underscored that for Danish food industries to survive and remain competitive in the future, there is an urgent need for more basic research and more research within the food and agricultural areas.

At the same time as the committee submitted its report on biotech research, the Danish agricultural organizations announced their readiness to promote a strategy aimed at consumer acceptance of applied biotechnology in food production.

The report concludes that biotechnology holds the potential to contribute real benefits for Danish society. Not only can biotechnology produce better food, it can also be produced with less impact on the environment. Furthermore, the report stresses that it is important for the Danish food industries to engage in biotechnology in order to meet competition from other countries. (See DA5002)

Section IV. Marketing issues.

Few GM labeled products have been marketed in Denmark. After having been mentioned in the press, they have been withdrawn from the market and reformulated with non-GMO content. The only exception is a GM beer (based on GM corn) that is brewed in Sweden and marketed at three bars in Copenhagen. After receiving negative attention in the press, two bars discontinued the sales. At this time, this appears to be the only product marketed in Denmark, which is labeled containing genetically modified ingredients.

The retailers at present only foresee disadvantages in marketing labeled biotech products, and over the next several years it seems that this policy will prevail.

Although numerous newspaper articles highlight the benefits of biotech food, the biotech products presently available are seen as advantageous for producers only and without benefits to the consumer. The possibility of lower consumer price for a biotech product is not considered a strong argument in favor of biotechnology by the average Dane. On the other hand, the public opinion sees no problems in developing biotech food for developing countries. The attitude seems to be that biotech has a place in other countries, "but we don't need them."

Section V. Capacity Building and Outreach.

On June 23 and 24, 2005 Dr. Kalidas Shetty, Professor of Food Biotechnology, University of Massachusetts and a Jefferson Science Fellow at US State Department, lectured to policy and opinion leaders and scientists on the subject of "Next Generation Food Biotechnology for Managing Human Health". The subject was chosen in order to further support the interest of Danish food industries in the development of biotech functional foods.